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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,742	06/27/2003	Yao Wang	EMC-01-183CIP1	7763
24227	7590	06/02/2008		
EMC CORPORATION OFFICE OF THE GENERAL COUNSEL 176 SOUTH STREET HOPKINTON, MA 01748			EXAMINER CHIOJACKI, MELLISSA M	
			ART UNIT 2164	PAPER NUMBER
			MAIL DATE 06/02/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/608,742

Applicant(s)

WANG ET AL.

Examiner

MELLISSA M. CHOJNACKI

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Remarks

1. In response to communications filed on March 7, 2008, no claims have been cancelled; claims 1, 10, and 18 have been amended, and no new claims have been added. Therefore, claims 1-18 are still presently pending in the application.

Claim Objections

2. Claims 1-18 are objected to because of the following informalities:

Claims 1, 10, and 18 recite the limitations “**assignable to**” and “**when** the control policy”, which defines the claim language as “intended use” (See MPEP § 2111.04).

Therefore, the claim language suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure.

Furthermore, “when” and “if” are conditional statements therefore making the steps optional and therefore, lacking patentable weight.

Claims 2-9, and 11-17 are objected to because they are dependent upon objected independent claims 1, 10, and 18. Appropriate corrections are required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 10, 11, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Bradley (U.S. Patent No. 6,665,780).

As to claims 1 and 10, Bradley teaches a data replication management server (*Bradley Col 8 lines 41-48*);

one or more data replication management software agents in communication with at least one of the two data storage systems and the data replication management server, the agents being configured for performing data replication operations in response to commands from the data replication management server, (*Bradley Col 8 lines 41-48 and Col 14 lines 6-15*) the data being replicated on a per volume basis (*Bradley Col 5 lines 30-33*), wherein server commands to each of the software agents are sent over a network in accordance with an IP protocol (*Bradley Col 5 lines 47-52*); Wherein at least one of the agents is configured to perform replication in accordance with one or more replication policies the use groups of mirrored logical volumes that store data associated with the replication the one or more replication policies comprising a control policy, the control policy being assignable to a first grouping level and the same control policy also being assignable to a second grouping level. (*Figure 3d shows two groups of mirrored logical volumes (Claim 11 of Bradley shows that these can be logical volumes), 1st Mirror Group and Second Mirror Group, in order to provide the mirroring they must have an implicit replication policy, For example figure 2B shows*

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selecting what to replicate, and Figure 2c shows selecting which storage units make up the group for which the replication will be made to. This replication policy must also inherently have a control policy as a control policy defines how to perform the replication Col 6 line 23- Col 8 line 16 teaches the control policy that is used for both the first grouping level and the second grouping level, thus the same control policy is assignable to both.) the DRM server not starting when the control policy is not associated at a highest grouping level. (This limitation is optionally recited and is thus non-limiting. See MPEP 2106.)

5. Claims 2 and 11 are rejected for the following reasons:
6. The architecture of claim 1, wherein at least one of the software agents includes a graphical user interface. (Col 5 lines 24-41)
7. Claim 18 is rejected for the following reasons:
See claim 1 and 10 rejection and Col 14 lines 16-26.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claims 3-6, 9, and 12-15 are rejected under 35 U.S.C 103(a) as being unpatentable over **Bradley** (U.S. Patent No. 6,665,780), in view of **Mutler** (U.S. Patent No. 6,757,696).

10. Claims 3-4 and 12-13 are rejected for the following reasons:

11. **Bradley** teaches the claims upon which these claims depend, but fails to expressly disclose the limitations of these claims. However **Mutler** teaches them as follows:

Col 31 lines 24-36 teaches the system using lock (or switches) to control read and write access between the software agents and the data storage, as they control read and write access the determine the direction of the flow of data from one source to another, and show that the server controls the replication. Claim 4 is also non-limiting as it is an intended use claim.

Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to include these features due the advantage that it allows data to be edited at multiple locations and still maintains consistency.

12. Claims 5 and 14 are rejected for the following reasons:

Bradley must inherently store configuration information for replication and configuration settings for the agents and the client in order to be able to communicate and provide the replication (i.e. the address of the client, what storage units are part of its group, and the control policy of the agent), However **Bradley** fail to teaches the

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storage of security information, but Mutler teaches the limitations of claims 5 and 14 as follows

The architecture of Claim 4, wherein the server stores configuration information for replication (*The system inherently must contain lock information*), security (*The server must inherently contain SSI configuration information Col 31 line 21-23*) and other configuration settings for the one or more software agents (*Col 31 lines 37-42*) and the one or more clients (*Col 31 lines 58-50*) in the data storage environment. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to include these features due the advantage that it allows data to be edited at multiple locations and still maintains consistency, as well as being able to do so securely.

13. Claims 6, 9, and 15 are rejected for the following reasons:

The architecture of Claim 5, wherein communication between the server and the one or more agents is encrypted for security purposes. (*Mutler Col 31 21-23*)

14. Claims 7-8, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradley (U.S. Patent No. 6,665,780), in view of Mutler (U.S. Patent No. 6,757,696), in further view of Dorenbos (U.S. Patent No. 5,751,813).

1. Claims 7-8 and 16-17 are rejected for the following reasons:

Mutler covers the claims upon which claim 6 is dependant, but fails to teach using encryption using 129 bit keys or greater. Dorenbos teaches the use of keys up to 1024

bits to encrypt messages (*Col 1 lines 20-33*). Thus, it would have been obvious to one of ordinary skill in the art to encrypt messages using 1024 bit keys due to the advantages that a larger key provides better protection for data which clients or the server may wish to keep private.

Response to Arguments

15. Applicant's arguments filed on 07-October -2007, with respect to the rejected claims 1-18 have been fully considered but they are not found to be persuasive:

In response to applicants' arguments regarding ***"After the previous amendment and the current amendment, all of the independent claims (1, 10, 18) have been amended to recite that the data replication management server does not start when the control policy is not associated at a highest grouping level,"*** the arguments have been fully considered but are not found to be persuasive, because the "when" makes the claim language conditional and therefore it is optionally recited and is thus non-limiting. See MPEP 2106.

In response to applicants' arguments regarding ***"None of the cited references discloses or suggests the data replication management server not starting when the control policy is not associated at a highest grouping level, as required by all the claims as amended. All of the claims including the dependent claims are patentable for at least the same reasons stated above,"*** the arguments have been fully considered but are not found to be persuasive, because the "when" makes the

claim language conditional and therefore it is optionally recited and is thus non-limiting.
See MPEP 2106.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELLISSA M. CHOJNACKI whose telephone number is (571)272-4076. The examiner can normally be reached on 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Charles Rones/

Supervisory Patent Examiner, Art Unit 2164